

Claims

1. A hydrogen storage installation comprising:
 - 5 - a liquid hydrogen tank (1) having an insulating jacket (2) made of cellular material incorporating at least one first metal screen (3),
 - a pipeline (7) for extracting liquid hydrogen,
 - a circuit (8) for discharging gaseous hydrogen,
 - 10 connected to the hydrogen inlet of a fuel cell (11) and having at least one portion (14) in a heat exchange relationship with the first screen,
 - an electrical refrigerating machine (15) connected to the fuel cell (11) and having at least one
 - 15 cold part (16) in a heat exchange relationship at least with the first screen (3).
2. The installation as claimed in claim 1, characterized in that the tank has at least one second
20 thermal screen (4) also in a heat exchange relationship with a portion (13) of the discharge circuit (8).
3. The installation as claimed in claim 2, characterized in that the second thermal screen (4) is
25 positioned inside the first thermal screen (3).
4. The installation as claimed in claim 3, characterized in that the second thermal screen (4) is
30 an envelope with inherent stability.
5. The installation as claimed in one of the preceding claims, characterized in that the insulating jacket (2) consists of at least two layers of
35 polyurethane foam.
6. The installation as claimed in one of claims 2 to 5, characterized in that at least one of the first and second thermal screens (3; 4) is composed of an assembly of at least two metal plates (31, 32).

7. The installation as claimed in claim 6,
characterized in that at least one part (14A; 14B) of
the portion (14; 13) of the circuit (8) in a heat
5 exchange relationship with the screen (3; 4) is formed
of zones deformed into a trough (34; 35) of said plates
(31; 32).

8. A vehicle comprising a hydrogen storage
10 installation as claimed in one of the preceding claims.

9. The vehicle as claimed in claim 8,
characterized in that the fuel cell participates in the
propulsion of the vehicle.